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ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
19304D GSRS MISSILE NUMBER 1026 ROUND NUMBER V-25.(U)
APR 79

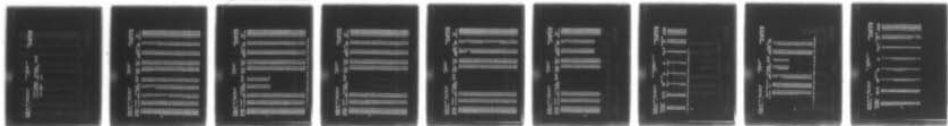
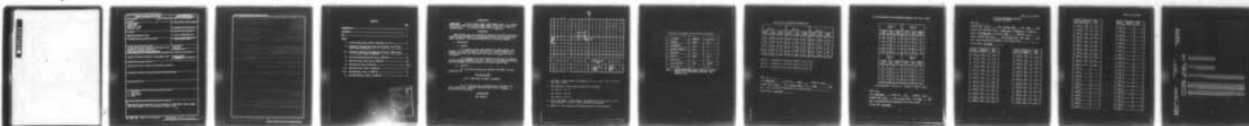
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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR 1012	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
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19. KEY WORDS (Continue on reverse side if necessary and identify by block number) 1. Ballistics 2. Meteorology 3. Wind		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 19304D GSRS, Missile Number 1026, Round Number V-25, are presented in tabular form.		

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INTRODUCTION

19304D GSRS, Missile Number 1026, Round Number V-25, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0940 MDT, 30 April 1979. The scheduled launch time was 0930 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

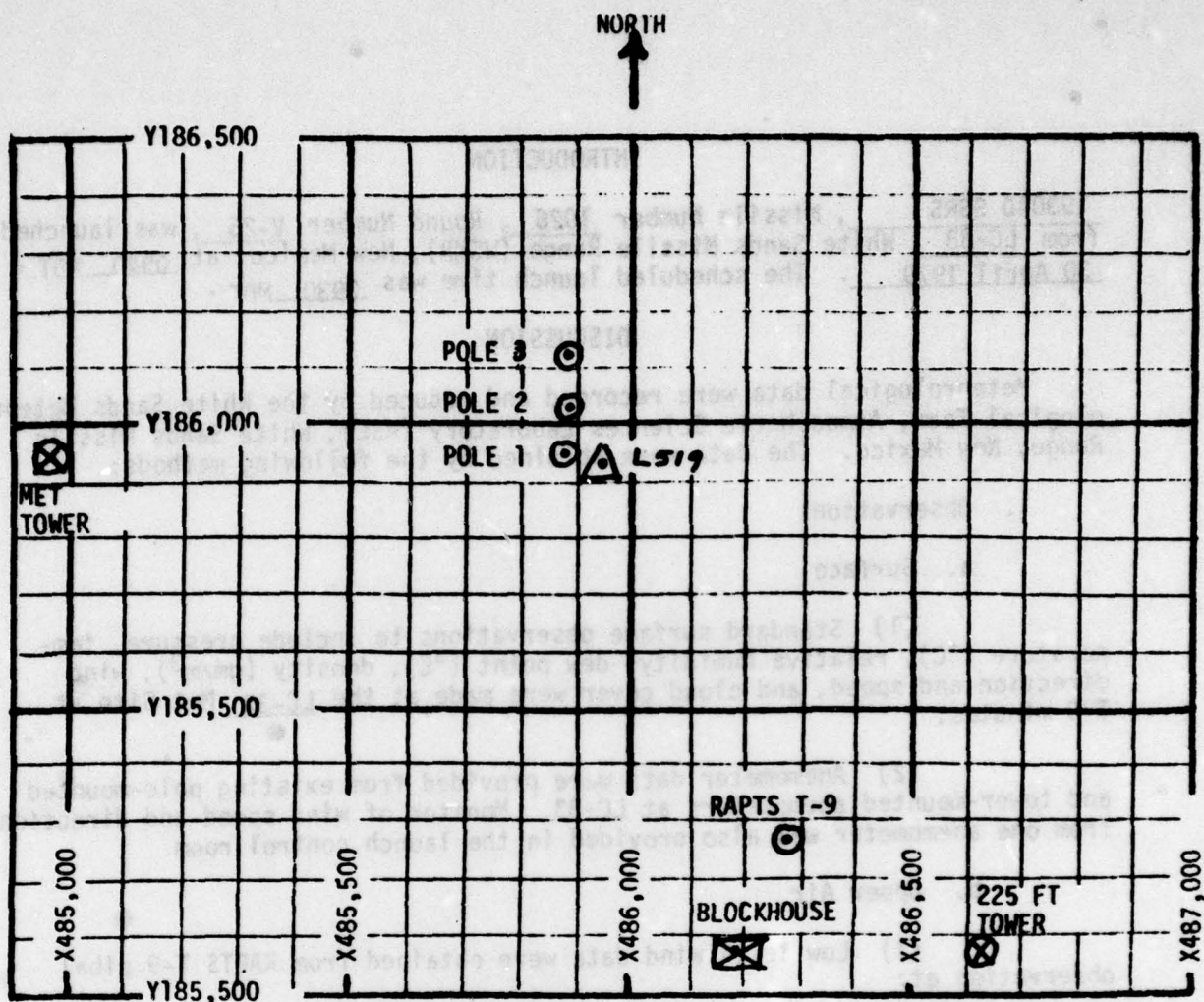
SITE AND ALTITUDE

LC-33 1080 meters (30-meter increments)

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 96,500 feet in 500-foot increments.

SITE AND TIME

SMR 0830 MST



1. MET TOWER - 4 Bendix Model T-120 Anemometers at 12 ft, 62 ft, 102 ft and 202 ft with E/A recorders.
2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders.
 - (a) Pole #1 - 38.7 ft
 - (b) Pole #2 - 53.0 ft
 - (c) Pole #3 - 83.6 ft
3. 225 FT WIND TOWER - 5 Bendix Model T-120 Anemometers at 35 ft, 88 ft, 128 ft, 168 ft and 200 ft with 5 X-Y visual indicators in Blockhouse.
4. RAPTS T-9 - Radar Automatic Pilot-Balloon Tracking System T-9 Radar

The data are presented in the following tabulations:

ELEVATION	3977.30	FEET/MSL
PRESSURE	879.4	MBS
TEMPERATURE	17.4	°C
RELATIVE HUMIDITY	67	%
DEW POINT	11.2	°C
DENSITY	1049	GM/IT ³
WIND SPEED	4	MPH
WIND DIRECTION	130	DEGREES
CLOUD COVER	7	Sc

TABLE I. SURFACE OBSERVATIONS TAKEN AT 0942 MDT, 30 APRIL 1979 AT LC-33, 19304D GSRS, MISSILE NO. 1026, ROUND NO. V-25.

LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	162	04	-30	173	05	-30	168	08
-20	162	04	-20	165	05	-20	171	07
-10	165	04	-10	189	04	-10	168	07
0.0	166	04	0.0	198	05	0.0	177	08
+10	191	04	+10	203	04	+10	180	08

POLE #1 = X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL

POLE #2 = X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL

POLE #3 = X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL

TABLE II

TYPE 19304D GSRS MISSILE NO. 1026 ROUND NO. V-25

LAUNCHED FROM LC-33 DATE 30 Apr 11 1979 TIME 0940 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH _____

OR TRUE NORTH TRUE NORTH.

LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1 12 ft			LEVEL #2 62 ft		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	164	3	-30	153	8
-20	153	8	-20	147	10
-10	159	9	-10	141	9
0.0	161	10	0.0	146	10
+10	158	9	+10	150	9
LEVEL #3 102 ft			LEVEL #4 202 ft		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	163	8	-30	141	8
-20	158	10	-20	147	9
-10	158	10	-10	149	9
0.0	163	9.5	0.0	149	8
+10	160	9.5	+10	147	8

WTSM COORDINATES: X484,882.64 Y185,957.73 H3983.00 (base)

TABLE III

TYPE 19304D GSRS MISSILE NO. 1024 ROUND NO. V-25
 LAUNCHED FROM LC-33 DATE 30 Apr 11 1979 TIME 0940 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH _____
 OR TRUE NORTH TRUE NORTH

PILOT BALLOON MEASURED WIND DATA
(30 meter increments)

TABLE IV

RELEASED FROM LC-33 DATE 30 April 1979 TIME 0942 MDT

RELEASE POINT COORDINATES (WSTM) X= 486.037.24 Y= 182.350.16 H= 3977.30

MISSILE TYPE 19304D GSRS MISSILE NO. 1026 ROUND NO. V-25

MISSILE LAUNCHED FROM LC-33 DATE 30 April 1979 TIME 0940 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH _____

OR TRUE NORTH TRUE NORTH

HEIGHT mtrsAGL	DIRECTION DEGREES	SPEED MPH
SFC	130	4.0
30	134	4.0
60	137	3.5
90	140	3.5
120	143	3.0
150	143	4.5
180	143	5.5
210	143	7.0
240	143	8.0
270	143	8.0
300	143	8.0
330	143	8.0
360	142	8.0

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
390	142	8.0
420	142	8.0
450	142	8.0
480	141	8.0
510	142	8.5
540	142	8.5
570	143	8.5
600	143	8.5
630	147	8.5
660	150	8.0
690	154	7.5
720	157	7.0
750	157	7.5

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
780	156	8.0
810	155	8.5
840	154	9.0
870	158	10.0
900	161	11.0
930	164	12.0
960	167	13.0
990	168	13.5
1020	169	13.5
1050	170	13.5
1080	171	13.5
1110		
1140		
1170		
1200		
1230		
1260		
1290		
1320		
1350		
1380		
1410		

HEIGHT mtrs AGL	DIRECTION DEGREES	SPEED MPH
1440		
1470		
1500		
1530		
1560		
1590		
1620		
1650		
1680		
1710		
1740		
1770		
1800		
1830		
1860		
1890		
1920		
1950		
1980		
2010		
2040		
2070		

STATION ALTITUDE 3997.30 FEET MSL
30 APR. 79 0830 HRS MST
ASCENSION NO. 81

SIGNIFICANT LEVEL DATA
1200060091
S M R

GEODETTIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL HUM. PERCENT
878.1 3997.3	17.7 10.1	61.0
850.0 4904.0	12.7 8.2	74.0
813.3 6117.1	9.6 8.2	91.0
790.7 6885.3	8.1 6.2	88.0
779.9 7259.0	8.1 2.0	69.0
760.3 7952.2	10.1 -4.5	36.0
740.6 8661.3	9.9 -14.0	17.0
700.0 10194.2	5.6 -15.0	20.0
662.6 11649.6	1.4 -15.5	27.0
624.8 13202.9	-1.8 -11.9	46.0
607.3 13944.9	-2.4 -24.7	16.0
547.8 16604.4	-8.4 -29.7	16.0
529.8 17454.9	-9.4 -29.2	18.0
513.8 18232.2	-10.7 -32.2	15.0
500.0 18918.4	-12.5 -28.4	25.0
450.8 21491.5	-18.3 -20.3	41.0
443.3 21903.0	-19.2 -26.3	53.0
400.0 24396.4	-23.8 -35.5	33.0
307.3 30535.2	-39.5 -49.5	33.0
300.0 31075.3	-40.9	
266.8 33604.4	-47.6	
250.0 35070.7	-50.4	
200.0 39759.2	-60.4	
175.3 42431.9	-65.8	
162.8 43908.1	-67.1	
154.8 44917.2	-64.4	
150.0 45553.3	-63.6	
115.8 50803.6	-62.6	
108.8 52078.1	-60.6	
100.0 53804.3	-62.1	
95.8 54678.1	-62.8	
78.3 58819.9	-58.7	
75.3 59631.7	-57.8	
70.0 61144.5	-59.8	
62.8 63375.9	-61.4	
59.3 64554.8	-59.9	
50.0 68055.5	-61.0	
30.0 78848.0	-49.3	
27.3 80889.3	-50.2	
24.8 82979.6	-46.9	

STATION ALTITUDE 3997.30 FEET MSL
30 APR. 79 0830 HRS MST
ASCENSION NO. 61

UPPER AIR DATA
1200060081
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
3997.3	878.1	17.7	10.1	61.0	1046.1	666.2	170.0	8.0	1.000289
4000.0	878.0	17.7	10.1	61.0	1046.1	666.2	170.0	8.0	1.000289
4500.0	862.4	14.9	9.1	68.2	1037.6	662.9	169.9	7.4	1.000284
5000.0	847.0	12.5	8.2	75.3	1028.1	660.0	169.9	6.9	1.000280
5500.0	831.8	11.2	8.3	82.4	1014.0	658.5	169.8	6.4	1.000277
6000.0	816.8	9.9	8.2	89.4	1000.2	657.1	169.5	6.0	1.000274
6500.0	802.0	8.9	7.2	89.5	985.9	655.8	168.6	6.6	1.000268
7000.0	787.4	8.1	5.2	82.2	971.1	654.7	175.3	6.9	1.000259
7500.0	773.0	8.8	.9	57.5	952.1	653.2	194.8	7.0	1.000243
8000.0	759.0	10.1	-4.8	34.7	931.5	653.3	225.1	7.9	1.000228
8500.0	745.2	9.9	-11.1	21.3	915.8	655.9	252.3	11.1	1.000216
9000.0	731.6	8.9	-14.3	17.7	902.5	654.7	268.7	13.5	1.000211
9500.0	718.2	7.5	-14.8	18.6	890.4	653.0	281.4	15.9	1.000208
10000.0	705.0	6.1	-15.3	19.6	878.5	651.4	289.8	15.6	1.000205
10500.0	692.0	4.7	-15.4	21.5	866.7	649.7	295.5	15.7	1.000202
11000.0	679.2	3.3	-15.4	23.9	855.0	646.0	289.2	17.1	1.000200
11500.0	666.5	1.8	-15.5	26.3	843.5	646.4	281.7	18.7	1.000197
12000.0	654.0	.7	-14.4	31.3	831.1	645.0	273.3	21.0	1.000195
12500.0	641.7	-.4	-13.1	37.4	818.4	643.9	263.3	23.7	1.000194
13000.0	629.6	-1.4	-12.2	43.5	805.9	642.7	254.5	27.0	1.000192
13500.0	617.7	-2.0	-15.8	34.0	792.9	641.8	249.7	29.8	1.000186
14000.0	606.0	-2.5	-24.8	16.0	779.7	641.0	247.2	31.8	1.000178
14500.0	594.4	-3.7	-25.8	16.0	767.9	639.7	250.5	29.9	1.000175
15000.0	583.0	-4.8	-26.7	16.0	756.4	638.3	254.9	28.2	1.000172
15500.0	571.8	-5.9	-27.6	16.0	745.0	637.0	260.6	26.8	1.000169
16000.0	560.8	-7.0	-28.5	16.0	733.8	635.6	262.5	26.5	1.000167
16500.0	550.0	-8.2	-29.5	16.0	722.8	634.3	263.6	26.6	1.000164
17000.0	539.4	-8.9	-29.4	16.9	710.7	633.4	267.4	27.7	1.000161
17500.0	528.9	-9.5	-29.4	17.8	698.5	632.7	270.7	29.8	1.000158
18000.0	518.5	-10.3	-31.3	15.9	687.0	631.7	273.3	33.2	1.000155
18500.0	508.4	-11.4	-30.4	18.9	676.4	630.4	273.7	34.1	1.000153
19000.0	498.4	-12.7	-28.3	25.5	666.2	628.9	273.6	34.1	1.000152
19500.0	488.4	-13.8	-28.1	28.6	655.8	627.5	273.7	32.5	1.000149
20000.0	478.7	-14.9	-28.0	31.7	645.5	626.2	273.9	32.1	1.000147
20500.0	469.2	-16.1	-28.0	34.8	635.4	624.8	274.3	33.9	1.000145
21000.0	459.8	-17.2	-28.1	37.9	625.5	623.4	276.8	36.4	1.000143
21500.0	450.6	-18.3	-28.2	41.2	615.7	622.1	280.3	39.5	1.000141
22000.0	441.5	-19.4	-26.7	52.2	605.8	620.8	283.4	42.8	1.000139
22500.0	432.5	-20.3	-28.4	48.2	595.6	619.6	286.1	46.2	1.000136
23000.0	423.7	-21.2	-30.1	44.2	585.6	618.5	286.6	48.4	1.000133

STATION ALTITUDE 3997.30 FEET MSL
 30 APR. 79 0630 HRS MST
 ASCENSION NO. 81

UPPER AIR DATA
 1200060081
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT DEGREES	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	415.1	-22.1	-32.0	40.2	575.8	617.3	286.5	50.2	1.000131
24000.0	406.6	-23.1	-33.9	36.2	566.2	616.2	286.9	51.3	1.000128
24500.0	398.2	-24.1	-35.7	33.0	556.8	614.9	287.4	52.2	1.000126
25000.0	389.8	-25.3	-36.8	33.0	547.8	613.3	288.5	52.7	1.000124
25500.0	381.5	-26.6	-38.0	33.0	538.9	611.8	289.7	53.2	1.000121
26000.0	373.4	-27.9	-39.1	33.0	530.3	610.2	290.2	53.8	1.000119
26500.0	365.4	-29.2	-40.3	33.0	521.7	608.6	290.7	54.3	1.000117
27000.0	357.7	-30.5	-41.4	33.0	513.3	607.0	289.7	55.5	1.000115
27500.0	350.1	-31.7	-42.6	33.0	505.1	605.4	288.7	56.8	1.000113
28000.0	342.6	-33.0	-43.7	33.0	497.0	603.7	287.4	58.9	1.000112
28500.0	335.4	-34.3	-44.9	33.0	489.1	602.1	286.1	61.1	1.000110
29000.0	328.2	-35.6	-46.0	33.0	481.3	600.5	286.7	60.3	1.000108
29500.0	321.3	-36.9	-47.2	33.0	473.6	598.9	287.3	59.4	1.000106
30000.0	314.4	-38.1	-48.3	33.0	466.1	597.3	287.9	58.7	1.000104
30500.0	307.8	-39.4	-49.5	33.0	458.7	595.6	288.5	58.1	1.000103
31000.0	301.0	-40.7	-66.0	4.6**	451.1	594.0	288.4	58.8	1.000101
31500.0	294.3	-42.0			443.5	592.3	288.3	59.6	1.000099
32000.0	287.7	-43.3			436.0	590.6	288.3	60.7	1.000097
32500.0	281.3	-44.6			428.7	589.0	288.5	62.3	1.000095
33000.0	275.0	-45.9			421.5	587.3	289.3	65.5	1.000094
33500.0	268.8	-47.2			414.4	585.6	290.3	68.4	1.000092
34000.0	262.7	-48.3			406.9	584.2	291.5	70.5	1.000091
34500.0	256.7	-49.3			399.4	582.9	292.7	73.0	1.000089
35000.0	250.8	-50.3			392.0	581.6	293.6	76.0	1.000087
35500.0	244.9	-51.3			384.7	580.2	294.5	79.2	1.000086
36000.0	239.2	-52.4			377.4	578.8	295.4	82.8	1.000084
36500.0	233.6	-53.4			370.3	577.4	296.3	85.8	1.000082
37000.0	228.1	-54.5			363.4	576.0	297.2	86.8	1.000081
37500.0	222.7	-55.6			356.6	574.6	298.0	87.8	1.000079
38000.0	217.5	-56.6			349.9	573.2	298.8	85.4	1.000078
38500.0	212.4	-57.7			343.4	571.8	299.2	83.0	1.000076
39000.0	207.4	-58.8			337.0	570.4	299.2	80.2	1.000075
39500.0	202.5	-59.8			330.7	569.0	299.1	77.4	1.000074
40000.0	197.6	-60.9			324.4	567.6	298.6	76.3	1.000072
40500.0	192.8	-61.9			318.0	566.2	297.8	76.5	1.000071
41000.0	188.1	-62.9			311.7	564.9	297.1	77.0	1.000069
41500.0	183.5	-63.9			305.6	563.5	296.7	78.0	1.000068
42000.0	179.1	-64.9			299.6	562.2	296.4	78.4	1.000067
42500.0	174.7	-65.9			293.6	560.9	296.6	76.7	1.000065
43000.0	170.4	-66.3			286.9	560.3	296.8	74.9	1.000064

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3997.30 FEET MSL
30 APR. 79 0630 HRS MST
ASCENSION NO. 01

UPPER AIR DATA
1200060081
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES TEMP POINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
43500.0	166.2	-66.7		280.4	559.7	297.1	72.0	1.000062
44000.0	162.1	-66.9		273.7	559.6	297.3	69.2	1.000061
44500.0	158.1	-65.5		265.2	561.4	297.5	68.7	1.000059
45000.0	154.2	-64.3		257.1	563.0	297.6	68.4	1.000057
45500.0	150.4	-63.7		250.1	563.9	297.7	68.9	1.000056
46000.0	146.7	-63.5		243.8	564.1	297.9	69.6	1.000054
46500.0	143.2	-63.4		237.8	564.2	297.7	69.0	1.000053
47000.0	139.7	-63.3		231.9	564.3	297.2	67.2	1.000052
47500.0	136.3	-63.2		226.2	564.4	296.6	65.3	1.000050
48000.0	133.0	-63.1		220.5	564.6	295.2	62.7	1.000049
48500.0	129.7	-63.0		215.1	564.7	293.6	60.2	1.000048
49000.0	126.6	-62.9		209.7	564.8	291.9	58.9	1.000047
49500.0	123.5	-62.8		204.6	565.0	290.2	58.2	1.000046
50000.0	120.5	-62.8		199.5	565.1	289.2	57.7	1.000044
50500.0	117.5	-62.7		194.5	565.2	289.1	57.3	1.000043
51000.0	114.7	-62.3		189.5	565.7	289.3	56.9	1.000042
51500.0	111.9	-61.5		184.2	566.8	290.9	55.9	1.000041
52000.0	109.2	-60.7		179.1	567.8	292.5	54.9	1.000040
52500.0	106.6	-61.0		175.0	567.5	293.3	53.3	1.000039
53000.0	104.0	-61.4		171.1	566.9	294.1	51.6	1.000038
53500.0	101.5	-61.8		167.3	566.3	293.7	49.8	1.000037
54000.0	99.0	-62.3		163.6	565.8	292.8	47.8	1.000036
54500.0	96.6	-62.7		159.9	565.2	292.0	46.3	1.000036
55000.0	94.3	-62.5		156.0	565.5	291.3	45.5	1.000035
55500.0	92.0	-62.0		151.8	566.1	290.8	44.7	1.000034
56000.0	89.8	-61.5		147.8	566.8	291.4	44.6	1.000033
56500.0	87.7	-61.0		144.0	567.4	292.0	44.4	1.000032
57000.0	85.6	-60.5		140.2	566.1	293.2	42.3	1.000031
57500.0	83.5	-60.0		136.5	568.8	294.7	40.2	1.000030
58000.0	81.5	-59.5		132.9	569.4	297.1	36.4	1.000030
58500.0	79.5	-59.0		129.4	570.1	300.6	32.0	1.000029
59000.0	77.6	-58.5		126.0	570.8	304.2	28.2	1.000028
59500.0	75.8	-57.9		122.7	571.5	307.2	25.1	1.000027
60000.0	74.0	-58.3		119.9	571.1	310.8	22.2	1.000027
60500.0	72.2	-58.9		117.4	570.2	305.9	20.2	1.000026
61000.0	70.5	-59.6		115.0	569.3	299.9	18.4	1.000026
61500.0	68.8	-60.1		112.5	568.7	292.9	17.5	1.000025
62000.0	67.1	-60.4		110.0	568.2	285.2	17.1	1.000024
62500.0	65.5	-60.8		107.5	567.7	280.5	17.0	1.000024
63000.0	64.0	-61.1		105.1	567.3	284.0	16.9	1.000023

STATION ALTITUDE 3997.30 FEET MSL
30 APR. 79 0830 HRS MST
ASCENSION NO. 61

UPPER AIR DATA
1200060061
S M R

GEODETTIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
63500.0	62.4	-61.2			102.6	567.1	287.6	16.6	1.000023
64000.0	60.9	-60.6			99.9	568.0	295.2	14.7	1.000022
64500.0	59.5	-60.0			97.2	568.8	306.7	12.4	1.000022
65000.0	58.0	-60.0			94.9	568.7	321.6	10.4	1.000021
65500.0	56.6	-60.2			92.7	568.5	342.2	8.3	1.000021
66000.0	55.3	-60.4			90.5	568.3	10.4	7.8	1.000020
66500.0	54.0	-60.5			88.4	568.1	7.5	8.0	1.000020
67000.0	52.7	-60.7			86.3	567.9	.5	8.3	1.000019
67500.0	51.4	-60.8			84.3	567.7	350.0	8.8	1.000019
68000.0	50.2	-61.0			82.4	567.5	332.7	10.0	1.000018
68500.0	49.0	-60.5			80.3	568.1	320.0	11.8	1.000018
69000.0	47.8	-60.0			78.2	568.8	312.6	12.7	1.000017
69500.0	46.7	-59.4			76.2	569.5	306.9	12.9	1.000017
70000.0	45.6	-58.9			74.2	570.2	301.5	13.3	1.000017
70500.0	44.6	-58.4			72.3	571.0	299.4	12.0	1.000016
71000.0	43.5	-57.8			70.4	571.7	297.2	10.6	1.000016
71500.0	42.5	-57.3			68.6	572.4	294.8	9.1	1.000015
72000.0	41.5	-56.7			66.8	573.1	293.6	7.1	1.000015
72500.0	40.5	-56.2			65.1	573.8	291.6	5.1	1.000014
73000.0	39.6	-55.6			63.4	574.6	286.9	3.7	1.000014
73500.0	38.7	-55.1			61.8	575.3	278.1	2.8	1.000014
74000.0	37.7	-54.6			60.2	576.0	262.1	2.1	1.000013
74500.0	36.9	-54.0			58.6	576.7	258.2	2.7	1.000013
75000.0	36.0	-53.5			57.1	577.4	258.7	3.8	1.000013
75500.0	35.2	-52.9			55.6	578.1	259.5	4.8	1.000012
76000.0	34.3	-52.4			54.2	578.8	263.6	7.1	1.000012
76500.0	33.5	-51.8			52.8	579.5	268.7	9.3	1.000012
77000.0	32.7	-51.3			51.4	580.3	270.8	11.5	1.000011
77500.0	32.0	-50.8			50.1	581.0	272.6	13.6	1.000011
78000.0	31.2	-50.2			48.8	581.7	273.9	15.6	1.000011
78500.0	30.5	-49.7			47.5	582.4	272.6	16.3	1.000011
79000.0	29.8	-49.4			46.4	582.8	270.0	16.0	1.000010
79500.0	29.1	-49.6			45.4	582.5	267.1	15.7	1.000010
80000.0	28.4	-49.8			44.4	582.2	263.2	14.4	1.000010
80500.0	27.8	-50.0			43.4	581.9	258.1	13.0	1.000010
81000.0	27.2	-50.0			42.4	581.9	251.8	11.6	1.000009
81500.0	26.5	-49.2			41.3	583.0	254.0	12.0	1.000009
82000.0	25.9	-48.4			40.2	584.0	256.2	12.4	1.000009
82500.0	25.4	-47.7			39.2	585.0	257.3	12.5	1.000009
83000.0	24.8	-46.9			38.1	586.0	253.5	11.7	1.000008

STATION ALTITUDE 3-97.30 FEET MSL
30 APR. 79 0030 HRS MST
ASCENSION 10. 01

UPPER AIR DATA
1200060061
S M R

GEODETTIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TH)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	24.2	-46.9		37.3	586.0	249.1	10.8	1.000008
64000.0	23.7	-46.8		36.4	586.1	244.0	10.1	1.000008
64500.0	23.1	-46.8		35.6	586.1	231.6	8.7	1.000008
65000.0	22.6	-46.8		34.8	586.2	214.7	7.8	1.000008
65500.0	22.1	-46.7		34.0	586.2	195.7	7.8	1.000008
66000.0	21.6	-46.7		33.2	586.2	190.0	8.0	1.000007
66500.0	21.1	-46.7		32.5	586.3	206.8	8.1	1.000007
67000.0	20.6	-46.6		31.8	586.3	222.1	8.8	1.000007
67500.0	20.2	-46.6		31.0	586.4	234.4	10.0	1.000007
68000.0	19.7	-46.5		30.3	586.6	244.5	11.6	1.000007
68500.0	19.3	-46.2		29.6	586.9	252.2	13.5	1.000007
69000.0	18.9	-46.0		28.9	587.2	258.0	15.5	1.000006
69500.0	18.4	-45.7		28.3	587.5	261.6	17.4	1.000006
90000.0	18.0	-45.5		27.6	587.8	262.0	18.2	1.000006
90500.0	17.6	-45.3		26.9	588.1	262.3	19.0	1.000006
91000.0	17.2	-45.0		26.3	588.4	262.7	19.7	1.000006
91500.0	16.9	-44.8		25.7	588.7	262.9	19.6	1.000006
92000.0	16.5	-44.6		25.1	589.0	263.1	18.9	1.000006
92500.0	16.1	-44.3		24.5	589.3	263.3	18.2	1.000005
93000.0	15.7	-44.1		24.0	589.6	263.4	17.4	1.000005
93500.0	15.4	-43.8		23.4	589.9	258.8	14.8	1.000005
94000.0	15.1	-43.6		22.8	590.2	252.2	12.4	1.000005
94500.0	14.7	-43.4		22.3	590.5	242.7	10.2	1.000005
95000.0	14.4	-43.1		21.8	590.8			1.000005
95500.0	14.1	-42.9		21.3	591.2			1.000005
96000.0	13.8	-42.7		20.8	591.5			1.000005
96500.0	13.5	-42.4		20.3	591.8			1.000005

STATION ALTITUDE 3997.30 FEET MSL
 30 APR. 79 0830 HRS MST
 ASCENSION NO. 81

MRN SIGNIFICANT LEVEL DATA
 1200060081
 S M R

GEODETTIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

GEOCENTRAL ALTITUDE DECA METERS	DIRECTION DEG (TN)	WIND DATA		DEW PT DEP DEG C	TEMPERATURE		PRESSURE MILLIBARS
		SPEED MPS	N-S MPS		E-W MPS	AIR DEG C	
2934.	9999.**	9999.**	-9999.**	99	-42.3	1.330+1	
2601.	239.	5.	3.	99	-46.6	2.000+1	
2518.	254.	6.	2.	99	-46.9	2.480+1	
2455.	253.	6.	2.	99	-50.2	2.730+1	
2393.	271.	8.	-0.	99	-49.3	3.000+1	
2067.	331.	5.	-5.	99	-61.0	5.000+1	
1961.	308.	6.	-4.	99	-59.9	5.930+1	
1925.	287.	9.	-2.	99	-61.4	6.280+1	
1857.	298.	9.	-4.	99	-59.8	7.000+1	
1812.	308.	13.	-8.	99	-57.8	7.530+1	
1787.	303.	15.	-8.	99	-58.7	7.830+1	
1661.	292.	24.	-9.	99	-62.8	9.580+1	
1635.	293.	25.	-10.	99	-62.1	1.000+2	

** WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 3997.30 FEET MSL
30 APR. 79 0830 HRS MST
ASCENSION NO. 41

MANDATORY LEVELS
1200060081
S M R

GEODETTIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4900.	12.7	8.2	74.	169.9	7.0
800.0	6562.	8.7	7.1	89.	168.5	6.7
750.0	8317.	10.0	-8.6	26.	244.6	9.7
700.0	10184.	5.6	-15.6	20.	293.0	15.5
650.0	12152.	.3	-13.9	33.	270.8	21.8
600.0	14243.	-3.1	-25.3	16.	248.8	30.8
550.0	16481.	-8.2	-29.5	18.	263.6	26.6
500.0	18892.	-12.5	-28.4	25.	273.6	34.2
450.0	21502.	-18.4	-28.0	42.	280.5	39.7
400.0	24356.	-23.8	-35.5	33.	287.3	52.0
350.0	27505.	-31.8	-42.6	33.	288.3	57.0
300.0	31014.	-40.9			288.3	58.9
250.0	34995.	-50.4			293.7	76.3
200.0	39664.	-60.4			299.0	76.2
175.0	42359.	-65.8			296.5	76.9
150.0	45432.	-63.6			297.8	69.0
125.0	49109.	-62.9			291.1	58.5
100.0	53640.	-62.1			293.2	48.7
80.0	58183.	-59.1			299.4	33.3
70.0	60936.	-59.8			298.4	18.1
60.0	64084.	-60.2			301.2	13.4
50.0	67811.	-61.0			331.8	10.1
40.0	72415.	-55.9			290.6	4.5
30.0	78512.	-49.3			271.1	16.1
25.0	82435.	-47.2			255.4	12.1
20.0	87290.	-46.6			237.7	10.5
15.0	93595.	-43.6			252.0	12.3

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3997.30 FEET MSL 30 APR. 79 0830 HRS MST ASCENSION NO. 81			MRN MANDATORY LEVELS 1200060081 S M R		GEODETTIC COORDINATES 32.48034 LAT DEG 106.42307 LON DEG		
GEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	WIND DATA SPEED MPS	N-S MPS	E-W MPS	DEW PT DEP DEG C	TEMPERATURE AIR DEG C	PRESSURE MILLIBARS
2853.	252.	6.	2.	0.	99	-43.6	1.500+1
2661.	238.	5.	3.	5.	99	-46.6	2.000+1
2513.	255.	6.	2.	0.	99	-47.2	2.500+1
2393.	271.	8.	-0.	0.	99	-49.3	3.000+1
2207.	291.	2.	-1.	2.	99	-55.9	4.000+1
2067.	332.	5.	-5.	2.	99	-61.0	5.000+1
1953.	301.	7.	-4.	6.	99	-60.2	6.000+1
1857.	298.	9.	-4.	8.	99	-59.8	7.000+1
1773.	299.	17.	-8.	15.	99	-59.1	8.000+1
1635.	293.	25.	-10.	23.	99	-62.1	1.000+2
1497.	291.	30.	-11.	28.	99	-62.9	1.250+2
1385.	298.	35.	-17.	31.	99	-63.6	1.500+2
1291.	297.	40.	-18.	35.	99	-65.8	1.750+2
1209.	299.	39.	-19.	34.	99	-60.4	2.000+2
1067.	294.	39.	-16.	36.	99	-50.4	2.500+2
945.	288.	30.	-10.	29.	99	-40.9	3.000+2
838.	289.	29.	-9.	26.	11	-31.8	3.500+2
742.	287.	27.	-8.	26.	12	-23.8	4.000+2
655.	280.	20.	-4.	20.	10	-18.4	4.500+2
576.	274.	18.	-1.	16.	16	-12.5	5.000+2
502.	264.	14.	2.	14.	21	-8.2	5.500+2
434.	249.	16.	6.	15.	22	-3.1	6.000+2
370.	271.	11.	-0.	11.	14	.3	6.500+2
310.	293.	8.	-3.	7.	21	5.6	7.000+2
254.	245.	5.	2.	5.	19	10.0	7.500+2
200.	169.	3.	3.	-1.	02	8.7	8.000+2
149.	170.	4.	4.	-1.	05	12.7	8.500+2